REMARKS

Reconsideration and allowance of the claims in the application are requested.

Claims 1-50 are pending in the case.

Claims 1-50 have been rejected under 35 U.S.C. §102(e) as anticipated by U.S. Publication No. 2002/0083025A1 to J. O. Robarts et al, published June 27, 2002, filed April 2, 2001 as a continuation-in-part of Application No. 09/216,193, filed on December 18, 1998 (Robarts).

US Publication 2003/0013459 A1 to P. J. Rankin et al., published January 16, 2003, filed July 2, 2002 (Rankin) and US Publication 2002/0061741 A1, published May 23, 2002 to K. T. Leung et al, based on a non-provisional based on a provisional application, filed August 1, 2001 (Leung) have been cited as prior art of record, but not cited.

Independent claim 51 has been added to define the invention of claim 1 in another embodiment. Dependent claims 52 – 62 have bee added to further define claims 1, 22, 25, 26, 27, 36, 46, 56, 18, 11, and 46, respectively. Claim 48 has been amended to further define the invention with respect to the cited art.

Before responding to the rejections, Applicant would like to distinguish Robarts from the present invention (Salmenkaita), as follows:

Robarts discloses a user wearable computer system or mobile phone (1) determining a user's context with respect to themes representatives of various user activity, and (2) identifying and providing appropriate computer actions in response to the user's context. The computer is accessible to or communicates with a non-portable computer, which can receive information from various user input and sensor devices and communicate the information to the wearable computer. Each theme is based on a thematic structure and includes related attributes, which reflect the characteristics, security, privacy, etc. of the theme. Attributes represent measures of specific context elements in the theme, e.g. ambient temperature, latitude, current user task. Computer application modules that provide attributes are referred to as context servers (CS). Modules that process attributes are referred to as context clients (CC). A characterization

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module (CM) acts as an attribute exchange mechanism for contexts information exchanged between CS and CC application modules. Various sensors provide the computer system or mobile phone with information. The information is forward to a characterization system running in the computer. The characterization system monitors the user and user's environment with respect to the attributes and creates a current model of the user's context. The various sources monitored include explicit user input to the computer; sensed user information; sensed environmental information; date and time information, and stored information, e.g. user preferences, definitions of various user defined groups or a default model of the user context. The inputs are processed by the characterization system to create an explicit model of the user context based on multiple attributes of a theme. The explicit model may be enhanced by automatic learning techniques using explicit rules from the explicit model or inferred rules produced by an explicit model executed by an inference engine. A variety of computer actions are provided as part of the user computer environment. The computer actions allow the computer system to affect the user by changing the content presented to the user; changing the format of the content presented and other computer control actions that manipulate the physical and electronic state of the user. Robarts fails to disclose element of Salmenkaita, as follows:

1.   Robarts applies computer actions to a user in response to theme activity and fails to disclose providing a user with recommendations in response to context-user activity.

Context servers generate values for one or more theme attributes. The context clients use the information from the themes to generate appropriate computer responses for the user. See paragraph 0221. In contrast, Salmenkaita generates context-activity recommendations for user selection. See the specification at page 10, lines 16 – 38. Robarts responses do not describe or suggest recommendations to a user for user selection.

2.   Roberts discloses a database of themes and fails to disclose a database of recommendations based on context-user activity.

Robarts discloses a database of themes, each including related sets of attributes that reflect the context of the user, including: (1) the user's mental state, emotional state, and physical or health condition; (2) the user's setting, situation or physical environment (including factors external to the user that can be observed and/or manipulated by the user, such as the state of the

user's wearable computer); and (3) the user's logical and data telecommunications environment (or "cyber-environment," including information such as email addresses, nearby telecommunications access such as cell sites, wireless computer ports, etc.). Paragraphs 040/204.

In contrast, Salmenkaita discloses a database containing current context activity pair and appropriate recommendations made in the past to many users. As the system makes new recommendations in response to context activity pairs submitted by their wireless devices, new recommendations are identified and added to contact activity pair database. See page 11, lines 37-42. Robarts fails to disclose a database of recommendations for context-activity pairs.

3.   Robarts discloses thematic structures including provisions for privacy, but fails to disclose a privacy control function, which revokes access by application programs to private context information based on a user's preference stored in a privacy profile.

Robarts discloses thematic structure (Figure 13), which provides user entries describing security; permission, and privacy for the theme. Robarts does not disclose a privacy control function for authenticating a program by computing a message authentication code, providing a digital signature, and a certificate indicating an acceptable application program for context-user activity. When an application program request access to the users private data, the privacy control can automatically check the message authentication code on its own digital signature to verify the program has not been changed and the program privacy control can also automatically verify the registration status of the program. See the specification at page 14, lines 40-45.

4.   Roberts provides computer actions in response to sensor information processed according to thematic structures and fails to disclose generating alternative recommendation for context-user activity according to a recommendation algorithm

Robarts discloses receiving an indication of current context information about the user that includes current values for each of the plurality of context attributes; determining that the identified contextual situation matches the indicated current context information in such a manner that the included current values of the indicated current context information include the values for the context attributes specified by the one identified contextual situation; and automatically providing to the user the alternate automated response that is associated with the

identified contextual situation Claim 7. In contrast, Salmenkaita discloses a recommendation algorithm, which matches the context-activity pairs stored in the database recommendation algorithm, which are similar to the context-activity pair, which was received from the device and it accesses the associated recommendations for the matched context-activity pairs from the database 192 and provides alternative recommendations. Page 10, lines 3 – 6. Robarts fails to disclose a recommendation algorithm for user selection of context-user activity.

Summarizing, Robarts fails to disclose a context-activity based recommendation system for a user that (1) incorporates a privacy control block that enables a mobile user to grant, deny or revoke access or to grant access for a limited time or to require an application program to request registration before a user grants access to a private data, (2) provides a recommendation database, which may be adapted to provide new recommendation to a user never before presented to the user, and (3) a recommendation algorithm for user selection of context-user activity.

Simply stated, Robarts discloses a computer generated context-activity modification system where the user has no control of the results. Whereas, Salmenkaita discloses a context-activity recommendation system where alternative recommendations are generated without user identification enabling the user to select the recommendation.

Now, turning to the rejection, Applicants respond to the indicated paragraphs of the Office Action as follow:

REGARDING PARAGRAPHS 1 AND 2:

Applicant notes the Examiner's remarks.

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REGARDING PARAGRAPHS 3 AND 4:

Claims 1-50 include elements not disclosed in Robarts, as follows:

A.   Claims 1, 22 and 25:

(i)   "Processing the sensor signals with a context inference engine."

Robarts at paragraphs 0054 and 0069 describes a characterization system executing on a computer to monitor the user and the environment and maintain a model of the current conditions of context. The model includes a variety of attributes that represent information about the user and the user's environment. The model is not derived from inferred rules as in the case of Salmenkaita. See the specification at page 18, lines 1-9 describing performing a context inference process. The characterization module is not an inference processing information according to rules. Robarts fails to disclose a context inference engine processing the sensor signals.

(ii)   "forming a context activity pair by selecting an activity and pairing it with the current context result."

Robarts at paragraphs 0193-197 and paragraph 005 describes user interfaces to allow a user to explicitly modify themes representing a user context. Each theme includes related sets of attributes that reflect the context of the user. The themes and the contexts go together. There is no new selection of a context for an activity as described in Salmenkaita at page 8, lines 30-41. Robarts fails to disclose selecting an activity and pairing it with a current context result provided by context inference engine processing sensor signals describing the user's environment.

(iii)   "Searching the database of recommendations without user identification using the context-activity pair."

Robarts at paragraphs 182 and 204 describes a computing device determining the most appropriate current theme layout from a variety of sources, such as news headlines, a to-do-list and calendar retrieved from a users personal or work data store, taking into account the

privacy, security and permission information in the thematic structure. The theme or context-activity pair is selected by the Robarts computing device based upon the context and provided to a characterization module for application to the user. In contrast, Salmenkaita searches a database of context activity pairs and related service recommendations without user identification as an input to a recommendation algorithm. The recommendations are in a remote server. Robarts, at best, discloses searching a database of events using a context activity pair, but without regard to user identification and fails to searching a database of recommendations, not events, where the user's identification is withheld.

(iv)   "providing recommendations to the user in response to the searching step."

Robarts at paragraph 182 describes a computing device determining the most appropriate current theme layout based upon information gathered by the computer in a variety of ways, such as a URI, a database query, executable objects such as a script, etc. In contrast, Salmenkaita discloses a recommendation algorithm matching the context activity pairs stored in the database. The algorithm accesses the associated recommendations for the matched context activity pair from the database. The recommendation algorithm returns recommendation to the user. The recommendation also includes the number of times recommended, one measure, which can be used by the user to make a selection of a context-activity. Robarts fails to disclose providing recommendations for a user based upon a recommended algorithm matching context-activity pairs.

Summarizing, Robarts fails to disclose a context inference engine outputting a current context result and pairing the context result with an activity: a database of context activity pairs and related service recommendations; controlling access of applications to private context information via a privacy control block, providing recommendations to a user based upon searching the database of context-activity without user identification as an input to a recommendation algorithm providing recommendations for user selection.

Without a disclosure of the foregoing steps in Claims 1, 22 and 25, there is no support for the rejection of the claims under 35 U.S.C. §102(e). Withdrawal of the rejection and allowance of claims 1, 22 and 25 are requested.

B.   Claims 2 and 23:

(i)   "processing of the sensor signals with a context inference engine embodied is embodied as program instruction executed within a users wireless device."

Robarts at paragraphs 56, 57 and 100 describes a body mounted computer receives various information which is forwarded to a characterization system. The characterization system monitors the user and user environment in order to create a current user context model. The information received includes explicit user input; sent user information and sense environmental information. The various input information provides context information about the users context. In contrast, Salmenkaita discloses a context inference engine executing a context inference process with any of several methods including Hidden Markov Modeling and weighting different input information, according to their relative values of importance appropriate for each environment. See page 18, line 1 continuing to page 19, line 42. Robarts fails to disclose a context inference engine embodied as programmed instructions determining a users current environmental state.

Without a disclosure in Robarts of a context inference engine processing sensor signals, there is no basis for the rejection of claims 2 and 23 under 35 U.S.C. §102(e).

Withdrawal and allowance of claims 2 and 23 are requested. In any case, claims 2 and 23 further limit claims 1 and 22 and are patentable on the same basis thereof.

C.   Claims 3 and 24:

(i)   "processing of the sensor signals with a context inference engine embodied as program instructions executed within a separate network server in response to signals from the user's wireless device,"

Robarts at paragraph 108 describes context client/server modules distributed to users on computer readable medium. The CC module 600 or other context client/server modules may also be distributed to users on computer-readable media". This doesn't describe distributing the sensor signals to a separate network server, but distributing CC or context client/server modules. These modules are used to process attributes and sensor signals.

In contrast, Salmenkaita discloses a context inference engine embodied in a server, as shown in Figure 2A and described in the specification page 9, line 40, continuing to page 10, line 7, responsive to signals from a user's wireless device. Robarts distributing context client/server modules on computer readable medium does not disclose a network server responsive to signals from a user's wireless device.

Withdrawal of the rejection and allowance of claims 3 and 24 are requested. In any case, claims 3 and 24 further limit claim 1 and 23 and are patentable on the same basis thereof.

D.   Claim 4:

Claim 4 further limits claim 1 and is patentable on the same basis thereof.

E.   Claim 5:

(i)   "The method of claim 3, wherein the wireless device offloads a portion of the processing of the sensor signals to a context inference engine to the server."

Robarts at paragraph 099 discloses a client server relating low level, intermediate level and higher level attributes within a thematic set related to location. A client server module periodically receives a GPS data strain from a CPS receiver that represents a most recent location of the user. The client server module processes and stores the received GPS data. In contrast, Salmenkaita discloses off loading work from the user device to a server, as described in the specification at page 20, line 41 continuing to page 21, line 4. Robarts fails to disclose a wireless device off loading a portion of sensor signals to a context inference engine located in a remote server.

Withdrawal of the rejection and allowance of claim 5 are requested. In any case, claim 5 further adds to the features of claim 1 and is patentable in its own merit or on the same basis as claim 1.

F.   Claim 6:

Claim 6 depends upon claim 1 is patentable on the same basis thereof.

G.   Claim 7:

Claim 7 further limits claim 1 and is patentable on the same basis thereof.

H.   Claim 8:

(i)   "The method of claim 3 wherein the signals from the user's wireless device are sent to the server without any user identification."

Robarts at paragraph 079 and 0100 describes attribute mediators who mediate multiple attribute instances. Paragraph 100 describes a client server module determining whether it has received a request from a characterization module for location information. If not, the client server module provides a requested attribute value to the characterization module.

Robarts paragraphs 210-211 describes group membership to control access and functionality associated with different groups. The group membership can be used to specify various common properties like privacy, security, permission, priority, time-active, theme-content and other properties. In this way, a user could know what other themes could be selected that would not change the current setting for such properties. Robarts describes blocking information from being received by an excluded user or group.

In contrast, Salmenkaita describes processing a user request without the identification of the user as described in page 2, lines 25-36, and sending the information to a server without the identification of the sender. Further Robarts teaches in [0226] "It may indicate that the shopper is interested in knowing what is on sale, and they are willing to share their personal product preferences, but decline to identify themselves except by a permanent but arbitrary ID that is assigned by the store". This store ID identificates a user as same user in the future and personal product preferences have this ID, whereas in Salmenkaita any information received by the server doesn't identificate the user or his preferences to any other previous usage time or information.

Without a disclosure in Robarts relating to sending signals from a user wireless device to a server without user identification, there is no support for rejection of claim 8 under 35 U.S.C. §102(3). Withdrawal of the rejection and allowance of claim 8 are requested.

I.   Claims 9 and 37:

(i)   "providing the recommendation in a separate server in response to context-activity pair information received at the server from the user's wireless device."

Robarts at paragraph 226-227 describes the distribution of themes and theme related information to theme servers and/or computing devices that create and use themes.

Paragraphs 226-227 do not disclose or suggest providing recommendations to users context activity status. The cited paragraphs also fail to disclose or suggest a separate server providing a recommendation in response to context activity pair information provided to the server from a wireless device. Without a disclosure in Robarts at paragraphs 226-227 relating to a separate server providing a recommendation in response to a context activity pair provided by a users wireless device, there is no support for the rejection of claims 9 and 37 under 35 U.S.C. §102(e). Withdrawal of the rejection and allowance of claims 9 and 37 are requested. In any case, claims 9 and 37 depend upon claims 1 and 6 and are patentable on their own merit or on the same basis as claims 1 and 36.

J.   Claims 10, 20 and 38:

(i)   "Maintaining the database whose context activity pair database by the server."

Robarts at paragraphs 133-138 describes occupations as themes with different attribute sets. The thematic attribute sets allow the user computer to characterize users context and react accordingly. In contrast, Salmenkaita discloses a database and a server remote from a user. The database stores and maintains context-activity pairs. Robarts fails to disclose theme sets and related context stored together on a database.

(ii)   "associating in the database the context-activity pair information with appropriate recommendations made in the past to many users."

Robarts at paragraph 245, 247 and 280 describes mentoring a user to invoke desired change with respect to a thematic set and the failure of implicit models to map to the users perceived reality. Specifically, Robarts describes in [0245] "By providing feedback to the

user when the behavior is detected, the user can become aware of the behavior and thereby effect a change". This doesn't describe recommendations made in the past to many users. Further, Robarts describes in [0247] "Some existing systems have also employed implicit models of the user and environment in order to provide various functionality". This doesn't describe recommendations made in the past to many users. Also, Robarts describes in [0280] "a manner, users can ask for an explanation of the proposed suggestion/task. To determine the appropriateness of a computer generated suggestion for a computer action. " This doesn't describe recommendations made in the past to many users. None of the paragraph 245, 247 and 280 disclose providing recommendations to a user based on past recommendations.

Withdrawal of the rejections of claims 10, 20 and 38 are requested based on the failure of paragraphs of 245, 247 and 280 to describe a context activity pair database in a remote server and providing recommendations to users based upon recommendations made in the past to many users.

K.   Claims 11 and 39:

(i)   "making new recommendations to the user in response to the context-activity pair information submitted by the wireless device and gathering the new recommendations and adding them to the database...."

Robarts at paragraphs 56-57 describes a body-mounted computer connected to one or more networks or other devices through wired or wireless communication means. As the body-mounted computer receives input information, the information is forwarded to a characterization system, which monitors the user or the users' environment to create a current user context model. Application programs can create new user context attributes. In contrast, Salmenkaita creates a database of context activity pair requests and recommendations based upon matching context user activity of past recommendations after filtering past recommendations to identify new or significant information. See the specification at page 2, lines 38-44. Robarts fails to disclose providing new recommendations and adding the new recommendations to a database.

Robarts at paragraphs 316-317 describes a datastore for context activity values, see "Data from the computing environment is sampled, filtered, and stored as <u>a pattern of explicit variable values (e.g., context attribute values)</u>", i.e. Robarts describes how to manipulate data from environment to produce context attribute values. These attribute values are needed to make recommendations. So, this doesn't describe recommendations to a user and adding them to the database.

Robarts describes in [0265] suggestion <u>for computer actions</u> by using various algorithmic techniques. This doesn't describe adding recommendations to the database.

Robarts describes in [0267-0271] a model to train the explicit model that is based on defining the context more carefully, see e.g. "A stronger correlation could be detected related to the time of day or the type of document the user is writing, thus increasing the ability of the system to meet a confidence threshold that allows presentation of the task to the user". Whereas, Salmenkaita describes the case where <u>usage is used</u> to increase variety, quality and pertinence.

Summarizing, Robarts describes a preference pattern module, which provides characterization of what task a user may prefer to perform in the near future using an implicit context model. In contrast, Salmenkaita discloses auto filtering a table of past recommendations to determine new recommendations using statistical usage information associated with a recommendation; user ratings associated with the recommendations or other factors distinguishing one recommendation from another. Robarts' preference pattern module does not disclose or suggest new recommendations from actions, which the user may prepare to execute in the near future.

Withdrawal of the rejection of claims 11 and 39 under 35 U.S.C. §102(e) and allowance thereof are requested.

L.   Claims 12, 29 and 40:

(i)   compiling statistical usage information about the recommendations and storing the usage information in the database."

Robarts in [0211] describes that "themes can also be categorized in various ways, and themes in some embodiments could store related categorical information." This doesn't refer to "compiling statistical usage information" in Salmenkaita.

Robarts in [0227] describes that "the distribution and use of themes can also support various businesses. This doesn't teach to "compiling statistical usage information" in 19173.

Robarts in [0259] describes that "Input Data from User 102 is provided to the User's Computer Environment 200, and includes the commands intended to control the computer as well as other explicitly offered or passively collected context-modeling data". This doesn't teach compiling statistical usage information and storing it to a database".

Summarizing, Robarts at paragraphs 211, 227 and 259 describes categorizing themes and distributing themes to provide new application or to enhance/modify functionality in a users computer environment. Salmenkaita can find no disclosure in Robarts collecting statistical usage information about recommendations and storing the usage information in the database. Robarts fails to disclose the elements of claims 12, 29 and 40 for the reasons previously indicated. Withdrawal of the rejection of claims 12, 29 and 40 and allowance thereof are requested.

M.   Claims 13, 30 and 40:

(i)   "providing the statistical usage information to the wireless device accompanying the recommendation."

Robarts in [0118] describes that "entertainment attribute sets may include attributes related to a user's favorite web sites, television channels, music preferences, and the like." This doesn't teach provide statistical usage information accompanying recommendations.

Summarizing, Robarts at paragraph 118 discloses a thematic set for entertainment, which does not relate to statically usage information accompanying a recommendation. Withdrawal of the rejection of claims 12, 30 and 41 under 35 USC 102(e) and allowance thereof are requested.

N.   Claims 14, 31 and 42:

(i)   "filtering the recommendations received at the wireless device by using the statistical usage information accompanying the recommendation."

Robarts in [0069] describes that the computer receives information from various input devices. This doesn't teach the claim 14.

Robarts in [0316] describes that data is sampled, filtered, and stored as a pattern of context attribute values, i.e. Robarts describes how to manipulate data from environment to produce context attribute values. These attribute values are needed to make recommendations. This doesn't teach of filtering the recommendations by using statistical usage information accompanying the recommendations.

Summarizing, Robarts at paragraphs 69 and 316 and 118 describes a cardiac condition to characterize a user condition. Data from a computing environment is sampled filtered and stored as a pattern of explicit variable values. Paragraph 118 relates to a thematic set for entertainment. Salmenkaita submits that filtering data for a cardiac conditions thematic set does not disclose or suggest providing recommendations to identify new recommendations. Withdrawal of the rejection of claims 14, 31 and 42 under 35 USC 102(e) and allowance thereof are requested.

O.   Claims 15 and 43:

(i)   "filtering the recommendation of the wireless device using statistical usage information associated with the recommendation."

Robarts at paragraphs 69 and 316 fails to disclose the elements of claims 15 and 43 for the same reasons indicated in the above Paragraph M. Withdrawal of the rejection of claims 15 and 43 under 35 USC 102(e) and allowance thereof requested.

P.   Claims 16, 32 and 44:

(i)   "accessing a history log of previous recommendations provided to the users; filtering new recommendations from a previous recommendations and providing a new recommendations to the user."

Robarts in [0301] describes "Machine learning algorithms that allow GUIs to self-modify based on the history of a user's actions". This doesn't describe a history log of previous recommendations provided to the user. Actually, in [0312] Robarts describes "a specific example of the automated learning techniques follows in which GUIs are modified based on a history of a user's actions." This doesn't describe a history log of previous recommendations provided to the user. The Examiner noted that Robarts describes

"filtering new recommendations from the previous recommendations and providing the new recommendations to the user."

Robarts in [0069] describes that the computer receives information from various input devices. This doesn't teach "filtering new recommendations from the previous recommendations and providing the new recommendations to the user."

Robarts in [0316] describes that data is sampled, filtered, and stored as a pattern of context attribute values, i.e. Robarts describes how to manipulate data from environment to produce context attribute values. These attribute values are needed to make recommendations. This doesn't describe "filtering new recommendations from the previous recommendations and providing the new recommendations to the user".

Summarizing, Robarts at paragraph 301 and 312 describes machine learning based on a history of the user action. Robarts discloses modifying a GUI based on a history of user action. In contrast, Salmenkaita discloses accessing previous recommendations and filtering previous recommendations to obtain new recommendations, which are provided to the user. Salmenkaita submits that modifying a GUI based on a history of user actions is not equivalent to suggest obtaining new recommendations. Withdrawal of the rejections of claims 16, 32 and 44 an allowance thereof are requested.

Q.   Claims 17, 33 and 45:

(i)   "Accessing a history log of previous recommendations provided to the user, including ratings of the previous recommendations; filtering recommendations using the ratings and providing the filtered recommendations to the user."

Claims 17, 33 and 45 are patentable over Robarts on the same basis as Claims 16, 32 and 44. Withdraw al of the rejection of claims 17, 33 and 45 under 35 USC 102(e) an allowance thereof requested.

R.   Claims 18 and 34:

(i)   "Providing the recommendations to an application program."

Robarts at paragraphs 74-77 and 57 describes application modules, context server, providing a characterization module, which acts as an exchange mechanism for attribute values. In contrast, Salmenkaita provides recommendations, not attributes, to the applications for implementing the program stored in the wireless device. Withdrawal of the rejection of claims 18 and 34 under 35 USC 102(e) and allowance thereof are requested.

S.   Claim 19:

(i)   "Providing to the user control over the privacy of the user's information within the network server."

Robarts at paragraphs 66, 200 and 204-206 describes entries in the thematic data structures relating to privacy, security and permission with respect to generated data for a wearable computer or wireless device, but not in a network server where information is accessible to others. Withdrawal of the rejection of Claim 19 under 35 USC 102(e) and allowance thereof are requested.

T.   Claims 21:

(i)   "making new recommendations to the user in response to the context-activity pair information submitted by the wireless device,"

Robarts at paragraph 56-57 describe the computer connected to one or more networks wired or wireless communication means. As various information is received, information is forwarded to a characterization system. The characterization system monitors the user and the user's environment. Applicant find no disclosure in paragraphs 56 and 57 relating to making new recommendation to the user in response to contacts activity pair information simulated by a wireless device.

(ii)   gathering the new recommendations and adding them to the database without any personal information about the user."

Robarts describes in [0316-0317] a datastore for context activity values, see "Data from the computing environment is sampled, filtered, and stored as a pattern of explicit variable values (e.g., context attribute values)". Further, Robarts describes how to manipulate data from environment to produce context attribute values. These attribute values are needed to make recommendations. This doesn't describe gathering the new recommendations and adding them to the database.

Robarts describes in [0265] suggestion for computer actions by using various algorithmic techniques. This doesn't describe "gathering the new recommendations and adding them to the database".

The Examiner noted that Robarts describes "without any personal information about the user."

Robarts describes in [0066] the user's context with respect to attributes that are not directly observable, e.g. the user's desired level of privacy for information being output (indicating the group of people who are allowed to perceive the information). This doesn't describe "without any personal information about the user."

Robarts describes in [0200] examples of the user interface displaying categories of information. This doesn't describe "without any personal information about the user."

Robarts describes in [0204-0206] a theme data structure including Privacy, Security, and Permission information. However, this doesn't describes information without any personal information about the user.

Summarizing, Robarts in paragraphs 316, 317, 265 paragraphs 200, 204-206 describes data from a computing environment is sampled, filtered and stored as a pattern of explicit variable values. A preference pattern module provides a characterization module continuously searches for strong correlation between previous computer states and current ones. The cited paragraphs do not disclose adding new information to the database, as described in the specification at page 1, lines 26 – 36.

Withdrawal of the rejection of claim 21 and allowance thereof are requested.

U.   Claim 26:

Claim 26 describes the elements of claim 1, 22 and 25 in a system format. Claim 26 is patentable over the cited paragraphs for the same reasons indicated for claims 1, 22 and 25.

V.   Claim 27:

Robarts describes in [0200] examples of the user interface displaying categories of information. This doesn't describe "without any personal information about the user." It is not clear what Examiner means saying that "wherein 'without including any user personal' read on 'device itself'"

Summarizing, Claim 27 describes claims 1, 22 and 25 in a business method format. For reasons discussed in the consideration of claims 1, 2 and 25, the cited paragraphs 051-052; 193-197, 005, 200, 183 and 211 fail to disclose 1) forming a database of context activity pairs and related service recommendations; 2) controlling access of applications through private contacts information via private and control block, and 3) providing recommendations for the selection of current contacts activity using a recommendation algorithm.

Without a disclosure of the foregoing elements in the cited paragraphs, there is no support for the rejection of claim 27 under 35 USC 102(e). Withdrawal of the rejection and allowance of claim 27 are requested.

W.   Claim 28:

Robarts describes in [0066] the user's context with respect to attributes that are not directly observable, e.g. the user's desired level of privacy for information being output (indicating the group of people who are allowed to perceive the information). This doesn't describe "without any personal information about the user."

Robarts describes in [0200] examples of the user interface displaying categories of information. This doesn't describe "without any personal information about the user."

Robarts describes in [0204-0206] a theme data structure including Privacy, Security, and Permission information. However, this doesn't describes information without any personal information about the user.

In any case, Claim 28 further limits claim 27 and is patentable over Robarts for same reasons indicated in the consideration of claims 11 and 21. Withdrawal of rejection of claim 28 and allowance thereof are requested.

X.   Claim 35:

Robarts describes [0118] that "entertainment attribute sets may include attributes related to a user's favorite web sites, television channels, music preferences, and the like." This doesn't teach providing at least portions of the database to a third party service provider.

Actually, Robarts in [0211] describes that "themes can also be categorized in various ways, and themes in some embodiments could store related categorical information." This doesn't teach providing at least portions of the database to a third party service provider.

Robarts in [0259] describes that "Input Data from User 102 is provided to the User's Computer Environment 200, and includes the commands intended to control the computer as well as other explicitly offered or passively collected context-modeling data". This doesn't teach providing at least portions of the database to a third party service provider.

Summarizing, Robarts at paragraphs 118, 211, 227 and 259 describe entertainment attributes; categorizing themes, distributing themes, and a computer environment, respectively. Salmenkaita can find no disclosure in Robarts describing the sale of a portion of

the user's database of computer actions. Withdrawal of the rejection of claim 35 and allowance thereof are requested.

Y.   Claim 36:

Robarts in [0301] describes "Machine learning algorithms that allow GUIs to self-modify based on the history of a user's actions". This doesn't describe a history log of previous recommendations provided to the user.

Robarts [0312] describes "a specific example of the use of automated learning techniques follows in which GUIs are modified based on a history of a user's actions." This doesn't describe a history log of previous recommendations provided to the user.

The Examiner noted that Robarts describes "forming context-activity pair information from the set of current context results and the set of related service history items".

Robarts in [0245] describes using context activity pair information to "give a user constant attention in order to watch for behavior that matches a rule or profile", whereas the claim just describes forming of context-activity pair information.

Robarts describes in [0247] "Some existing systems have also employed implicit models of the user and environment in order to provide various functionality" and further "For example, an implicit model could discover that there is a recent strong correlation between a user's changing of traffic lanes followed by a changing of the radio station." This doesn't describe forming of context-activity pair information but just using a context-activity pair information.

Robarts describes in [0280] "a manner, users can ask for an explanation of the proposed suggestion/task." This doesn't describe forming of context-activity pair information but just using a context-activity pair information. Further, Salmenkaita forms context-activity pair from the current-context result and related service history items. Robarts doesn't teach this feature.

Summarizing, the cited paragraphs 0051-0052 and 00193-197 have been distinguished in the consideration of claim 26. The cited paragraph 0044 was distinguished in the consideration of claim 7.The cited paragraphs 0301 and 0312 have been distinguished in the consideration of clam 17. The cited paragraphs 0301; 0312;247and 280 have been distinguished herein.. The cited paragraphs 182 and 204 have been distinguished in the consideration of claims 19 and 26, respectively.

Without a disclosure of the elements of claims 36, there is no support for the rejection thereof under 35 USC 102 (e), Withdrawal of the rejection and allowance of claim 36 are requested.

Z.   Claim 46:

The Examiner noted that Robarts describes "filtering the recommendations using an algorithm to identify new and significant information as new recommendations."

Robarts describes in [0069] that "an audio input receives an audio data signal from the microphone, and then parses, amplifies/attenuates, filters, packages or otherwise processes such a signal to produce a sound attribute", i.e. how to produce attributes, whereas Salmenkaita teaches how to produce new recommendations.

Robarts describes in [0316] how to manipulate data from environment to produce context attribute values. In Robarts these attribute values are needed to make recommendations. So, Robarts doesn't teach how to filter the recommendations using an algorithm to identify new and significant information as new recommendations. Moreover, in the claim 46 recommendations are filtered after the database is searched and the recommendations provided to the user.

Summarizing, the cited paragraphs in Claim 46 have distinguished in the consideration of Claims 1, 22, 25, 26, 27 36 and related dependent claims. Withdrawal of the rejection and allowance of claim 46 are requested.

AA.   Claim 47:

(i)   "forming a metadata vector of the sensor signals for processing in the device or transmission to a server for processing."

Examiner noted that Robarts describes "forming a metadata vector of the sensor signals for processing in the device or transmission to a server for processing".

Robarts describes in [0316] that "data from the computing environment is sampled, filtered, and stored as a pattern of explicit variable values (e.g., context attribute values) and weighted vectors."

Salmenkaita can find no disclosure in paragraph 316 relating to a metadata vector combining the sensor signals as described in the specifications at page 11, line 32 continuing to page 12, line 20. Robarts processes individual sensor signals, and fails to disclose sensor signals combined as a metadata vector for processing by a context inference engine. Without such disclosure there is no basis for the rejection of claim 47 under 35 USC 102(e). Withdrawal of the rejection and allowance of claim 47 are requested.

BB.   Claim 48:

The Examiner noted that Robarts describes "establishing a privacy user interface to a privacy control element enabling the user to set privacy policies related to access to the context inference engine".

 Robarts describes in [0066] "user's desired level of privacy for information being output (indicating the group of people who are allowed to perceive the information)".

Robarts describes in [0200] "other embodiments could include an interaction control to allow the user to specify whether to share this particular type of context information (or other types of context information) with others, and if so with whom".

Robarts describes in [0204 - 0206] "Security information can be specified to control the various types of access. In the illustrated embodiment, similar groups as those mentioned above can be used when specifying permission or security information. In the

illustrated embodiment, access to information about the scheme (including whether the theme is executing or is the current theme) is available to the current user, to other users that are part of the current user's Family or Friends groups of users, and to the Source of the theme."

In other words, Robarts describes methods how to control information sharing with other people, whereas Salmenkaita teaches method how to access the context inference engine.

In any case, Claim 48 further limits claim 46 and is patentable on the same bases as claim 46. Withdrawal of the rejection and allowance of claim 48 are requested.

CC.   Claim 49:

The Examiner noted that Robarts describes "excluding user personal data from the database of context-activity pairs." The references in Robarts [0203, 0252-0254 and 0288] cited by Examiner don't describe excluding user personal data. Furthermore the references in Robarts [0203, 0252-0254 and 0288] cited by Examiner don't describe a database of context-activity pairs.

Summarizing, Robarts at paragraphs 203; 252-254 and 288 describes theme matching properties which allows the system to determine whether the theme matches the current context; providing data to an explicit software and an implicit model for improving the usefulness of the computers and model of the themes, respectively. Salmenkaita can find no disclosure in the cited paragraphs of excluding personal data from a database of context-activity pairs. Without such disclosure, the rejection of claim 49 fails. Withdrawal of the rejection and allowance of claim 39 are requested.

DD.   Claim 50:

The Examiner noted that Robarts describes "providing context activity pair datasets in the database to third parties for market research." Robarts describes that "the distribution and use of themes has applications in the industrial, retail and consumer markets", whereas 19173 teaches providing context-activity pair datasets. Themes in Robarts are produced according to context-activity pairs.

In any case, Claim 50 is patentable over Robarts for the reasons indicated in the consideration of claim 36.Withdrawal of the rejection and allowance of claim 50 are requested.

REGARDING PARAGRAPH 5:

The Examiner's comments are noted.

REGARDING PARAGRAPH 6:

Applicants have reviewed US Publication NO. 2003/0013459 A1 (Rankin et al) and US Publication No. 2002/0061741 A1 (Leung et al)) and concludes: (1) Rankin was filed after the filing date of the present application, and is not prior art, and (2) Leung fails to disclose or suggest the elements of independent claims 1, 22, 25, 26, 27, 36, and 46 and is only cumulative to the cited art.

PATENTABILITY SUPPORT FOR CLAIMS 51 – 62

A.   Claim 51:

Claim 51 describes the method of claim modified to process sets of sensor signals; pairing sets of activities with sets of current context results; searching using sets service histories using sets of context-activity pairs and forming context-activity pair information sets of context-activity pairs and related service history items.

A.   Claims 52, 53, 56 –58:

Claims 52,53, 56-56 describe

(i)   "forming a database of context activity pairs and related service recommendations in a remote server."

Robarts discloses a theme server computing device suitable for distributing themes and theme related information to various theme users computing devices, which modify user themes. See paragraphs 213-214. Salmenkaita discloses a database of context-activity pairs and related recommendations of other users in a remote server, as described in the specification at page 2, lines 26 – 36. The remote server 150 in Robarts collects and distributes sensor information to the portable computer. Paragraph 0051. Robarts fails to disclose a database of context and activity pairs together with service recommendations for the context-activity pair.

(ii)   "controlling access of applications to private context information via a privacy control block."

Robarts discloses a thematic structure shown in Figure 13 providing entries for securities; permission and privacy. In contrast, Salmenkaita discloses a privacy control block 150 found in Figure 2 and Figure 2A, which grants or revokes access by application programs to private context information, as described in the specification at page 12, line 40-line 45. Robarts fails to disclose a privacy control block controlling access of applications to private context information.

C.   Claims 54, 55, 56, 59, 60 61 and 62 further define elements of the parent claim.

CONCLUSION:

Having distinguished Claims 1 – 50 from the cited art and supported the patentability of new claims 51 – 62, applicants request entry of the amendment, allowance of the claims and passage to issue of the case.
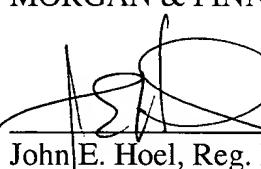
AUTHORIZATION:

The Commissioner is hereby authorized to charge any additional fees which may be required for the timely consideration of this amendment under 37 C.F.R. §§ 1.16 and 1.17, or credit any overpayment to Deposit Account No. 13-4503, Order No. 4208-4012.

Respectfully submitted,

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